



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,927	10/31/2000	Seraphin B. Calo	YOR920000757US	9927

7590

12/02/2005

DAVID AKER
23 SOUTHER ROAD
HARTSDALE, NY 10598

EXAMINER

THOMPSON, MARC D

ART UNIT	PAPER NUMBER
----------	--------------

2144

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/702,927	Applicant(s) CALO ET AL.	
	Examiner Marc D. Thompson	Art Unit 2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35,37-40,42-45 and 47-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35,37-40,42-45 and 47-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application has been reassigned to a new Examiner. See Conclusion section below, for new Examiner contact information.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/28/2005 has been entered.
3. Claims 1-35, 37-40, 42-45, and 47-56 remain pending.

Priority

4. No claim for priority has been made in this application.
5. The effective filing date for the subject matter defined in the pending claims in this application is 10/31/2000.

Drawings

6. The Examiner contends that the drawings submitted on 10/31/2000 are acceptable for examination proceedings.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-35, 37-40, 42-45, and 47-56 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/321,908 in view of Ebata et al. (U.S. Patent Number 6,513,061), hereinafter referred to as Ebata. This is a provisional obviousness-type double patenting rejection.

9. The claims describe very similar subject matter to application 10/321,908, where the broadest claim(s) of said application differ from the presented claims only in the provision for selection of proxy server(s) based (presumably) on distance or logical proximity.

10. Ebata clearly disclosed the provision for proxy cache server selection based on physical/logical location information. See, inter alia, Abstract.

11. It would have been obvious to modify the claims set forth in the copending application with the teachings of Ebata, minimally, in order to select the most appropriate server for client request fulfillment. See, inter alia, Ebata, Column 5, Lines 43-48.

12. Claims 1-35, 37-40, 42-45, and 47-56 are rejected.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 7, 20, 33 and 34 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to multiple classes of statutory subject matter. Since 35 USC § 101 describes “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof” in the alternative only, the provision for an apparatus, system, and/or article of manufacture which performs the method of a previously presented claim fails to recite a single statutory class for which the claim may be assigned, and thus, fails to fall within conformance with 35 USC § 101.

15. Based on the above discussion, resultantly these claims may exhibit further problematic legal conformance, minimally including an inability to ascertain the proper metes and bounds of the claim(s) (35 USC § 112, second paragraph), and failure to further limit a preceding claim (35 USC § 112, fourth paragraph, and 37 CFR § 1.75). These basis of rejections are not expressly provided, but should be considered as effectively included in this action. It follows that proper amendment or clarification in regard to this rejection which addresses these issues will likewise obviate parallel issues in regard to these other sections of the law.

16. For purposes of examination, these claims will be considered as independent claims which effectively share scope with the claims from they depend.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. Claims 1-35, 37-40, 42-45, and 47-56 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

19. All the claims recite language requiring "...selecting [] one server to be closer to a client [] than [a] backend server." It is unclear what meaning the term "closer" has in this context. The term "closer" is typically used to describe physical (i.e., geographical) proximity, but may include other measures of "proximity" (nearness/closeness) including logical distances (such as number of hops or arrangement of terminals). Indeed, a terminal may use network connectivity/resources to connect to processes executing on/in the same machine; a connection/service request originating in a terminal at New York, which is subsequently routed through Toyko (perhaps to authenticate the user or software license), and eventually reaches the same sending terminal in New York (or alternately, Washington D.C.), provides one topological networking example where the physical proximity of the endpoints is radically different from a determination of logical proximity. It is unclear what the use of the limitation "closer to a client" is encompassing.

20. Claims 2 and 24 do not terminate properly; the claims terminate with a semicolon (or do not terminate at all) instead of terminating with a period. It is unclear whether more of the claims are intended to be present.

Art Unit: 2144

21. Claim 11 recites the limitation "at the first proxy server" in lines 4-5 of the claim, and recites "said proxy" in line 8 of the claim. There is insufficient antecedent basis for these limitations in the claim.

22. Claims 15, 17, and 18 recite "means for selecting..." in Lines 20-24, Lines 20-23, and Lines 20-24 of the claims, respectively. It is unclear what structure disclosed in the specification is being relied upon to properly interpret this "means plus function" language in accordance with 35 USC § 112, sixth paragraph, rendering the claims indefinite. Should Applicant intend interpretation using 35 USC § 112, sixth paragraph, supporting section(s) of the specification will be necessary to properly determine the proper metes and bounds of the claimed invention.

23. Claims which depend from these rejected claims inherit the deficiencies of their respective parent claims.

Clarification is required.

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §102(f) or (g) prior art under 35 U.S.C. §103(a).

26. Claims 1-9, 11-24, 27, 30-35, 37-40, 42-45, 47-49, and 55-56 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ebata et al. (U.S. Patent Number 6,513,061), hereinafter referred to as Ebata, in view of Saulpaugh et al. (U.S. Patent Number 6,789,126), hereinafter referred to as Saulpaugh, or alternatively, over Saulpaugh in view of Ebata.

27. The present invention includes use of load balancing functionality distributing requests made by client processes to one of a plurality of proxy servers, application distribution defining a set of programs and associated connectivity information for the application module(s), a backend server providing administrative control of the application as a whole, and selection of a particular proxy server process which resides logically closer than backend server(s) to the requesting client process. Further provisions for load considerations, request forwarding, program module and state caching, application and request logging, and dynamic content caching.

28. Ebata disclosed a proxy server which selected a particular proxy server process based on physical/logical location information, additionally considering measured load information, providing a mechanism allowing client processes to invisibly access application modules of distributed applications in a networking environment. See, inter alia, Abstract, Column 4, Lines 23-29, Column 4, Line 66 through Column 5, Line 5, and Column 7, Lines 41-47. Ebata additionally disclosed the provision for caching programmatic and content information at proxy servers, and the equivalence of proxy servers and proxy cache servers. See inter alia, Column 3, Lines 55-59, and Column 5, Lines 60-65. Connectivity and naming conventions as known in the art allowed for distribution and location/direction of program modules, requests, and content storage for responding to client service requests. See, inter alia, Column 7, Lines 41-47, and Columns 9-10.

Art Unit: 2144

29. While Ebata disclosed a substantial portion of the claimed invention, Ebata remained silent in regard to many specifics concerning application module distribution in the disclosed networking environment. This would have motivated one of ordinary skill in the art at the time of invention to explore the related arts of network application distribution in order to isolate teachings which would allow artisans to implement to proxy server selection mechanism as disclosed by Ebata in a system equipped to handle truly distributed application involving multiple computing machines on a network.

30. In the related art of distributed applications, Saulpaugh disclosed the concept of a “message gate” which acted as an endpoint for a client or service in a distributed networking environment. See, inter alia, Abstract. A message gate would invisibly join the client and client request to a servicing endpoint, allowing for registration of services and associated locations for the service, and routing of requests to the service endpoint using a naming convention which initially resolves the request to the message gate, resulting in resolving the request to a particular servicing endpoint specified (or mapped to) the message gate. See, inter alia, Columns 7-8, and Column 31, Lines 25-34. Additionally, the distribution of application modules on a network, service naming conventions and location mapping, request routing, and service object instantiation were all well known in the prior art well prior to filing of the present application (consider Java RMI, CORBA, Jini, DCOM, J2ME, J2EE, .NET, etc.) generally known as distributed networking using distributed applications. See, Saulpaugh, inter alia, Columns 2-5. The teachings of Saulpaugh essentially provide a reliable and robust messaging mechanism allowing client requests to have been routed to distributed proxy processes using any of these above distributed application paradigms. See, inter alia, Column 7, Line 57 through Column 8,

Art Unit: 2144

Line 50, Column 38, Lines 25-33, Column 67, Lines 4-43, etc. Naming conventions, addressing abilities of the gates, mappings of interfaces, services, and spaces using URI/URL designations was clearly evident, additionally including provision for proxy interface service instantiation and extensive discussion of distributed components, inter alia, in Column 34, Line 34 through Column 44, Lines 35. Saulpaugh further explored the use of service/device proximity determination, servlets, physical network load measurements, activity logging, event logging, and content caching. See, inter alia, Column 7, Lines 11-20, Column 8, Lines 22-24, Column 29, Lines 40-65, Column 44, Lines 1-35, and Column 67, Lines 23-43.

31. In short, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the proxy server selection system set forth by Ebata with the messaging paradigm set forth by Saulpaugh in order to provide transparent connectivity between requesting clients and servicing servers (inter alia, Ebata, Column 4, Lines 23-29, and Saulpaugh, Column 8). Alternatively, it would have been obvious to one ordinary skill in the art at the time of invention to modify to distributed messaging system of Saulpaugh with the proxy selection methodology set forth by Ebata in order to select the most efficient proxy server to provide a requesting client with the requested service using as few network resources as possible in the shortest amount of time. See, inter alia, Saulpaugh, Column 4, Lines 25-34, Column 8, Lines 1-24, etc., and Ebata, Column 4, Lines 23-29.

32. Claims 1-9, 11-24, 27, 30-35, 37-40, 42-45, 47-49, and 55-56 are rejected.

Art Unit: 2144

33. Claims 1-9, 11-24, 27, 30-35, 37-40, 42-45, 47-49, and 55-56 are rejected under 35 U.S.C. §103(a) as being unpatentable over Java 2 Platform Enterprise Edition Specification, version 1.2, hereinafter referred to as J2EEv1.2, in view of Ebata et al. (U.S. Patent Number 6,513,061), hereinafter referred to as Ebata.

34. The present invention includes use of load balancing functionality distributing requests made by client processes to one of a plurality of proxy servers, application distribution defining a set of programs and associated connectivity information for the application module(s), a backend server providing administrative control of the application as a whole, and selection of a particular proxy server process which resides logically closer than backend server(s) to the requesting client process. Further provisions for load considerations, request forwarding, program module and state caching, application and request logging, and dynamic content caching.

35. J2EEv1.2 disclosed some well known mechanisms for defining “web components” (i.e., Enterprise JavaBeans, EJB) which were “components that are deployed, managed, and executed on a J2EE server...including servlets...”, “[not requiring] that a J2EE product be implemented by a single program, a single server, or even a single machine”, “...able to deploy application components that execute with semantics described...”, “. See, inter alia, Sections 2.1, 2.2, 2.3, 2.4, 2.4.3-2.4.5, 8.1. One interpretation of this piece of art parallel to the claimed invention was the equivalence of the “backend” server as the terminal/process storing the J2EE application deployment descriptor which listed the application’s components as modules allowing for J2EE application deployment as individual J2EE components libraries, or applications. See, inter alia, Section 8, Figure 8.1, and Section 8.3. Lastly, J2EEv1.2 provided dynamic content generation using servlets, inter alia, in Section 6.6. The J2EEv1.2 system provided distributed functionality

Art Unit: 2144

of defined application processes and scalable implementations of structured business logic using proxy services, and generalized distributed application modules.

36. An artisan working with the J2EEv1.2 system would have been motivated to search the related arts to isolate teachings which would allow implementation of the J2EEv1.2 standard.

After all, this document was a proposed standard dictated to operate in conjunction with unstated business logic(s), and generalized computer networking systems implementing distributed application functionality.

37. In the related art of proxy processes and the distribution of requests in a networking system, Ebata disclosed use of a server which selected a particular proxy server process based on physical/logical location information, additionally considering measured load information, providing a mechanism allowing client processes to invisibly access application modules of distributed applications in a networking environment. See, inter alia, Abstract, Column 4, Lines 23-29, Column 4, Line 66 through Column 5, Line 5, and Column 7, Lines 41-47. Ebata additionally disclosed the provision for caching programmatic and content information at proxy servers, and the equivalence of proxy servers and proxy cache servers. See inter alia, Column 3, Lines 55-59, and Column 5, Lines 60-65. Connectivity and naming conventions as known in the art allowed for distribution and location/direction of program modules, requests, and content storage for responding to client service requests. See, inter alia, Column 7, Lines 41-47, and Columns 9-10.

38. The combination of J2EEv1.2 and Ebata resulted in a modularly defined application networking system and environment which provided distributed proxy functionality for distributed network application logic and the ability to utilize proxy caching processes using

Art Unit: 2144

defined naming conventions to reduce name resolution delay and processing as well as to reduce latency of pending client requests by load balancing and intelligent application module logic distribution. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the generalized teachings of J2EEv1.2 with the proxy selection methodology set forth by Ebata in order to reduce the overhead of request distribution in a typical distributed application environment.

39. Claims 1-9, 11-24, 27, 30-35, 37-40, 42-45, 47-49, and 55-56 are rejected.

Response to Arguments

40. The arguments presented by Applicant in the response, received on 2/28/2005, are not considered persuasive.

41. Applicant argues that the prior art of record did not disclose the provision for selection of a proxy server "closest" to a requesting client process. It is submitted that, among other references cited herein, Ebata clearly disclosed this functionality.

42. Applicant argues that the prior art of record did not disclose distributed applications utilizing backend application servers and redundant storage of executing programmatic code modules. It is submitted that the nature of distributed applications, particularly those which utilized proxy processes, multiple object instantiations, and service message routing, distribution, and load balancing, were known in the art, and fully disclosed by the prior art of record.

43. It is noted that a number of well known prior art technologies perform the generalized functionality of distributed applications, service brokering, load balancing, and naming services in order to distribute functional pieces of business logic among myriad terminals of a typical

Art Unit: 2144

network, including but not limited to Jini, DCOM (Distributed Component Object Model), CORBA, RMI, and J2EE, to name only a few. Likewise, the broadly argued functionality of proxy usage and content caching is disclosed as Applicant admitted prior art in the present specification at Pages 1-2. The distributed nature of such an arrangement will not be considered a basis for patentability in such breadth.

Allowable subject matter

44. Claims 10, 25-26, 28-29, 50-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

45. These claims recite positive limitations including proxylet-record and field lookup for distributed application executing at the proxy server, and application and application event logging at the backend servers which is not fairly taught or suggested in the prior art of record in combination with the limitations set forth in any respective parent claims.

Conclusion

46. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

47. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc D. Thompson whose telephone number is 571-272-3932. The examiner can normally be reached on Monday-Friday, 9am-4pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, David Wiley can be reached

Art Unit: 2144

at 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned has recently changed, and is now 571-273-8300.

48. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MARC D. THOMPSON
MARC THOMPSON
PRIMARY EXAMINER

Marc D. Thompson
Primary Examiner
Art Unit 2144